Performance Measures

EPA's clean air objectives focus on improving ambient air quality and visibility, reducing emissions of toxic and other air pollutants, bringing all areas of the country into compliance with national air quality standards, and reducing acid rain.

EPA will measure performance in these areas by: directly measuring concentrations of air pollutants; calculating, directly measuring and estimating emissions of air pollutants; measuring acidic deposition and concentrations in rainfall; measuring visibility; and tracking the number and status of nonattainment areas. Examples of measures and indicators that will be used or reported include:

- Trends in air quality for each of the six criteria air pollutants.
- Number of days when one or more air quality standard is exceeded in the nation's largest metropolitan areas.
- Estimated total quantities of emissions of each of the six criteria pollutants or their precursors.
- Estimated total quantity of air toxics emitted.
- Change in average annual visibility impairment in national parks and wilderness areas (Class I areas).
- Total quantity of sulfur dioxide and nitrogen dioxide emitted by electric utilities.
- Average annual sulfate and nitrate concentrations in rainfall.
- Concentration and dry deposition of sulfate and nitrate particles.
- Number of nonattainment areas and their associated populations that reach attainment and areas that have been redesignated for each of the criteria air pollutant standards.

GOAL 2: Clean and Safe Water

All Americans will have drinking water that is clean and safe to drink. Effective protection of America's rivers, lakes, wetlands, aquifers, and coastal and ocean waters will sustain fish, plants, and wildlife, as well as recreational, subsistence, and economic activities. Watersheds and their aquatic ecosystems will be restored and protected to improve human health, enhance water quality, reduce flooding, and provide habitat for wildlife.

Importance of this Goal

Safe drinking water is the first line of defense in protecting human health. Safe and clean water is needed for drinking, recreation, fishing, maintaining ecosystem integrity, and commercial uses such as agricultural and industrial production. Our health, economy, and quality of life depend on reliable sources of clean water.

All living things need clean water. Waterfowl, fish, and other aquatic life who live in and on the water, as well as plants, animals, and other life forms in terrestrial ecosystems are dependent on clean water. The challenge of maintaining clean water focuses on ensuring that the entire aquatic ecosystem remains healthy.

To achieve this goal, EPA will expand implementation of the watershed approach in carrying out the Safe Drinking Water Amendments of 1996 and the provisions of the Clean Water Act. Protecting watersheds involves participation by a wide variety of stakeholders, a comprehensive assessment of the condition of the watershed, and implementation of solutions based on the assessment of conditions and stakeholder input. The watershed approach enhances the abilities of EPA, its federal partners, states, tribes, local governments, and other stakeholders to implement tailored solutions and maximize the benefits gained from the use of increasingly scarce resources.

Objectives

- By 2005, protect human health so that 95 percent of the population served by community water systems will receive water that meets drinking water standards, consumption of contaminated fish and shellfish will be reduced, and exposure to microbial and other forms of contamination in waters used for recreation will be reduced.
- Conserve and enhance the ecological health of the nation's (state, interstate, and tribal) waters and aquatic ecosystems -- rivers and streams, lakes, wetlands, estuaries, coastal areas, oceans, and groundwater -- so that 75 percent of waters will support healthy aquatic communities by 2005.
- By 2005, pollutant discharges from key point sources and nonpoint source runoff will be reduced by at least 20 percent from 1992 levels. Air deposition of key pollutants impacting water bodies will be reduced.

What Will Be Accomplished

EPA established the objectives listed above to capture the progress expected toward the goal of clean and safe water. Together, the objectives form an integrated vision of continued progress toward the goal. EPA's efforts will ensure that progress toward one objective contributes to progress toward another. For example, reducing point and nonpoint source pollution will contribute to improved water quality leading to healthier aquatic communities and safer drinking water. The following accomplishments are anticipated in the course of meeting our objectives.

Drinking Water

While most drinking water is very safe, occasional violations of pollutant standards are of concern because of the large number of people that can thereby be exposed to toxic chemicals or microbiological contaminants. The greatest risks posed by such contamination of public drinking water supplies are to sensitive populations such as children, and adults with compromised immune systems. For the 240 million Americans whose drinking water comes from public water systems, EPA's work in partnership with states, tribes, local governments, and water suppliers will improve drinking water safety and provide better information about local drinking water quality. By 2005, the population served by community water systems providing drinking water that meets all existing health-based standards will increase to 95% from a baseline of 81% in 1994. EPA will issue standards to protect public health for an additional ten high-risk contaminants (e.g., disinfection byproducts, arsenic, and radon) by 2005. Compliance with new standards will be high.

As a step toward improving drinking water safety, all states will assess the quality of the rivers or other waters that are used as sources for drinking water. By 2005, 60 percent of the population served by community water systems will receive their water from systems with source water protection programs in place which include assessments and, as necessary, specific protection activities. Further, the percentage of waters designated by states and tribes for drinking water supply use that will provide safe drinking water after treatment will increase. To increase protection of community water supplies from contamination by shallow injection wells, the injected volumes to those wells will be reduced by 25% from 1995 levels by 2005. Also, EPA is putting a new emphasis on ensuring that all members of the public receive the information they need to protect themselves against significant sources of risk from drinking water.

Edible Fish and Safe Recreation Waters

Many Americans enjoy fishing, swimming, and boating, and many get their livelihood from these activities. Protecting Americans from exposure to unhealthy levels of contaminants in waters where such activities occur is a high priority. Exposure to contami-

nated water can cause serious illness. These types of exposure pose a special risk to children, women of child-bearing age, subpopulations who fish for food or sport or who use public bathing beaches or waters for recreation, and people with compromised immune systems. There is significant uncertainty about the extent of exposure through fishing and recreation, and EPA will work to improve the understanding of this issue. By 2005, consumption of contaminated fish and shellfish will be reduced, exposure to microbial and other forms of contamination in waters used for recreation will be reduced, and the percentage of waters attaining the designated uses protecting the consumption of fish and shellfish and the designated recreational uses will increase.

Surface Water and Groundwater

Over the last 25 years, the nation has made a great deal of progress in cleaning up waters polluted by major dischargers such as sewage treatment plants and industrial facilities. However, state reporting indicates that broad-based surface water and groundwater quality problems remain. In addition, the growing problems of habitat alteration and destruction, hydro-modification, emerging threats from exotic species, and other ecosystem changes complicate efforts to attain and sustain a healthy water environment. In coming years, EPA will focus on the most critical remaining threats, while ensuring that achievements made to date in protecting and improving water quality and aquatic habitat are maintained. By 2005, the efforts of EPA and its partners to restore and protect watersheds will result in 75% of waters supporting healthy aquatic communities.

Wetlands

Wetlands provide critical habitat for fish and wildlife, help maintain water quality by filtering pollutants, and provide flood control by absorbing water as it runs off the land. Today, less than half of the wetlands originally found in this country remain. Halting the net loss of wetlands and moving toward a net gain is integral to accomplishing the goal of clean and safe water. By 2005, the work of federal, state, tribal and local agencies, the private sector, hunting and fishing organizations, and citizen groups will result in an annual net increase of 100,000 acres of wetlands.

Point Source and Nonpoint Source Pollution

EPA and its partners have made much progress in reducing pollutant discharges from "point sources" (fixed facilities and runoff discharge pipes such as storm drains); however, point source pollution from a variety of sources including Combined Sewer Overflows (CSOs), Publicly Owned Treatment Works (POTWs), and industrial facilities continues to impair water quality. By 2005, annual point source loadings from CSOs, POTWs, and industrial sources will be reduced by 30% from 1992 levels.

Nonpoint source pollution is a major cause of surface water impairment that has been inadequately addressed by the clean water programs of the past 25 years. Runoff from urban areas, agriculture, and silvicultural operations contributes significantly to the nonpoint source problem. By 2005, nonpoint source sediment and nutrient loads to rivers and streams will be reduced. Erosion from cropland, used as an indicator of success in controlling sediment delivery to surface waters, will be reduced by 20% from 1992 levels.

In addition to pollutants that are deposited directly into the water from a water discharge pipe or flow off the land as nonpoint source runoff, airborne pollutants (including nitrogen and mercury) that are deposited in water resources are a growing source of concern for their impairment of water quality. By 2006, water quality will be improved by reducing by 50-75% releases of targeted persistent toxic pollutants that contribute to air deposition, and reducing deposition of nitrogen by 10-15% from 1980 levels.

Strategies for How It Will Be Accomplished

Achieving clean and safe water is dependent on the day-to-day work undertaken by states, tribes, local governments, and private organizations. EPA will continue to provide tools, guidance and funding to states, tribes and local governments to enhance their ability to carry out their daily responsibilities for protection of the nation's water resources. Research will strengthen the scientific basis for drinking water standards development, will result in the development of effective beach evaluation tools, and will enhance understanding of the structure

and function of aquatic systems through the development of improved aquatic ecocriteria. Further, EPA will appropriately target enforcement and compliance assurance resources to ensure that the goal of safe and clean water is met. The actions that are required as a result of specific enforcement will contribute to achieving clean and safe water in particular communities. Additionally, EPA will continue to cooperate with other federal agencies that share the responsibilities for various water quality, wetland protection, erosion control, and human health programs, including the U.S. Geological Survey, U.S. Fish and Wildlife Service, U.S. Department of Agriculture (including the U.S. Forest Service), National Oceanic and Atmospheric Administration, the Centers for

Disease Control, and the U.S. Army Corps of Engineers. EPA anticipates that beyond its Federal, state, tribal, and local government partners, numerous other stakeholders will play an important role in accomplishing this goal.

Watershed Approach

Although the nation has made substantial progress over the past 20 years toward its water goals, the challenges of the 21st century will require a different approach to environmental protection. The principal remaining threats do not involve discrete facilities and conveyances, but derive from the activities of citizens in general. Full involvement of stakeholders at all levels of government, the regulated community, and the public is fundamental to the watershed approach. Therefore, EPA must engage and motivate all citizens to be responsible and contribute to enhancing and protecting their own rivers, streams, lakes, wetland areas, and estuaries. EPA will highlight the major needs of each watershed, and draw on the natural concern that people have for the waters around which they live, work and play.

To help EPA and its partners strategically target efforts toward the most pressing problems, EPA will continue to develop and refine tools that help identify and address problems on a watershed basis. One such tool is the Index of Watershed Indicators (IWI). IWI will enable users to simultaneously assess a variety of problems within a watershed and measure progress over time in improving the overall condition of the nation's watersheds. Information on individual watersheds can be accessed through the Internet program "Surf Your Watershed" at <http://www.epa.gov/surf>.

Drinking Water Protection

The Safe Drinking Water Act Amendments of 1996 chart a new and challenging course for EPA, states, tribes, and water suppliers. In keeping with the watershed approach, EPA will expand the source water protection program by developing program guidance, providing technical and other support to states and tribes on source water protection and assessment, and conducting extensive outreach to involve water systems, local governments, interested groups, and the public. EPA will continue to set drinking water safety standards and provide technical assistance and other support to states and tribes, with an emphasis on establishing new standards for microbiological contaminants, disinfectant and disinfection byproducts, and other pollutants identified as posing potentially high risks.

Drinking Water Compliance

At the same time that EPA sets new drinking water standards, EPA will work with states, tribes, local governments, and water suppliers to increase compliance with existing standards, with an emphasis on the following strategies:

- Continue to manage the Drinking Water State Revolving Fund and other funding mechanisms to provide safe and reliable drinking water.

- Assist small systems to build or strengthen their technical, financial, and managerial capacity.
- Manage an operator certification program to ensure that every water system operator can perform certain key compliance functions.

To ensure that consumers can readily obtain and understand information pertaining to the safety of their own drinking water supplies, and any special circumstances that might affect them or their families, EPA will ensure that "right-to-know" reports are available for all customers of public water systems.

Edible Fish and Safe Recreation Waters

The states and tribes have primary responsibility for protecting their residents from the health risks associated with contaminated noncommercially caught fish and wildlife and recreational waters. Human health risks, including risks to sensitive populations such as children, and subsistence and recreational anglers, will be abated through development of appropriate criteria and through enhanced fish tissue monitoring, risk assessment, and development of fish, shellfish, and wildlife consumption advisories. EPA will establish improved safety guidelines and pollution indicators so that local authorities can monitor their recreational waters in a cost-effective way and close them to public use when necessary to protect human health. For beaches, EPA's three-part plan is to strengthen beach standards and testing, improve the scientific basis for beach assessment, and develop methods to inform the public about beach conditions. By identifying and informing the public of human health risks and providing the tools needed to address those risks (including consistent national guidance, methods, and monitoring/sampling protocols), EPA can help improve the ability of states, tribes, and local communities to protect their residents from this type of exposure.

Water Quality Standards and Criteria

Continued development of scientifically-based, defensible water quality standards and criteria, and monitoring progress in attaining these standards, is critical to states', tribes', and EPA's ability to enhance or maintain the quality of lakes, rivers, streams, wetlands and coastal waters. EPA will support risk characterization, priority setting, implementation of standards and criteria, and risk management by states and tribes on a watershed basis. EPA will work with tribes to implement government-to-government provisions, establish final water quality standards for waters under tribal jurisdiction, and address restoration and protection of subsistence harvest areas. States and EPA will make significant progress toward completing all needed Total Maximum Daily Loads (TMDLs) for impaired U.S. waters (TMDLs assess the water body's capability to carry pollutant loads while meeting designated uses). EPA will work with states and tribes to improve implementation of TMDL programs establishing the analytical basis for watershed-based decisions regarding the need for additional pollution reduction where standards are not being met.

Wetlands

EPA will work with federal, state, tribal, and local partners on protection and community-based restoration of wetlands. In addition, EPA, in coordination with the Corps of Engineers and the Natural Resources Conservation Service of the U.S. Department of Agriculture, will work to avoid, minimize, and compensate for wetland losses through Clean Water Act Section 404 and Farm Bill programs.

Point Source Pollution

To maintain progress in these areas, EPA will continue to develop and revise national effluent guideline limitations and standards. These regulations are the basis for permits that protect water quality. The Agency will continue to manage the Clean Water State Revolving Fund program and other funding mechanisms to provide clean and safe water. The Agency will work to streamline and simplify development of effluent guidelines and implementation of the National Pollutant Discharge Elimination System (NPDES) permit program, using revised performance measures geared toward ecological and human health outcomes. Performance measures will be revised in partnership with states and tribes. A major effort will continue to reorient and coordinate all parts of the point source program on a watershed basis, with emphasis on those watersheds where these sources cause substantial water quality impairment. EPA will work with a variety of stakeholders to reduce nutrients and pathogens that enter the nation's waters from animal feeding operations.